

REMARKS

Claims 17, 20 and 22 have been amended to overcome the Examiner's objections.

Claim 1 has been amended to correct a typographical error.

The Examiner rejects Claims 1-10, 13-15, and 39-40 under 35 U.S.C. Section 101:

because these claims recite nothing more than a manipulation of data or merely recite a disembodied database, in a form of an algorithm steps and they did not include any tangible computer or network references. The algorithm of claims 1-10, 13-15, 39-40 appear to be an abstract idea, given that it does not produce any kind of useful, concrete, and tangible result. The recited process must somehow apply, involve, use, or advance the technological arts.

Office Action at page 4 (emphasis in original.)

Applicant disagrees.

The rejected independent claims provide:

1. A method, comprising:

(a) tracking, by a repeat contact determining agent and over a selected time period, for a set of a plurality of agents servicing a plurality of discrete real-time and non-real-time contacts from different customers, a number of discrete real-time and non-real-time contacts serviced by the set of agents that are and/or are not related to one or more other discrete real-time and non-real-time contacts from different customers serviced by the plurality of agents;

(b) maintaining, by the repeat contact determining agent and for the set of agents, an indicator indicating at least one of (i) a number of discrete real-time and non-real-time contacts, serviced by the set of agents during the selected time period, that are not related to one or more other discrete real-time and non-real-time contacts serviced by one or more of the plurality of agents and (ii) a number of discrete real-time and non-real-time contacts, serviced by the set of agents during the selected time period, that are related to one or more other discrete real-time and non-real-time contacts serviced by the plurality of agents; and

(c) using the indicator for at least one of the following purposes:

(c1) evaluation of performance of the contact center and/or one or more agents; and

(c2) determination of a routing destination for a selected currently pending contact.

13. A method, comprising:

(a) at least one of receiving a first real-time contact from and initiating a second real-time contact with a first customer;

(b) determining, by a repeat contact determining agent, whether the first and/or second contact is related to another real-time or non-real-time contact with the first customer; and

(c) when the first and/or second contact is related to another real-time or non-real-time contact with the first customer, servicing, by a contact center resource, the first and/or second contact differently than when the first and/or second contact is unrelated to another real-time or non-real-time contact with the first customer.

According to the USPTO OG Notice dated November 22, 2005:

If the examiner determines that the claim does not entail the transformation of an article, then the examiner shall review the claim to determine if the claim provides a practical application that produces a useful, tangible and concrete result. In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." The claim must be examined to see if it includes anything more than a Sec. 101 judicial exception. If the claim is directed to a practical application of the Sec. 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. Sec. 101. If the examiner does not find such a practical application, the examiner has determined that the claim is nonstatutory.

The Rejected Claims Produce a Useful Result

Claims 1 and 13 are directed to tracking agent service of contacts and identifying related, active contacts to optimize substantially contact center performance.

Accordingly, they each produce a useful result.

The Rejected Claims Produce a Tangible Result.

Regarding the tangible requirement, the above OG Notice states:

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a Sec. 101 judicial exception, in that the process claim must set forth a practical application of that Sec. 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application."). "[A]n application of a law of nature or mathematical formula to a . . . process may well be deserving of patent protection." Diehr, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also Corning, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 ("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . ."). In other words, the opposite meaning of "tangible" is "abstract."

Even if the algorithm used by Claims 1 or 13 are abstract ideas (which they are not), Claims 1 and 13 nonetheless produces a tangible result. Both claims set forth a practical application of an abstract idea.

For Claim 1, the practical application is tracking a number of related contacts serviced by agents and maintaining an indicator recording a number of related or unrelated contacts. The real world result of the algorithm is one or more indicators providing information on the number of related or unrelated contacts handled by the contact center. This can be an important and useful item of information for optimizing contact center performance.

For Claim 13, the practical application is determining, when a contact is received or initiated, whether the incoming or outgoing contact is related to another contact with the same customer. When it is related, the incoming or outgoing contact is treated differently than when it is not related to another contact. The differing treatment of the contact depending on the findings of the algorithm is a tangible result.

The Rejected Claims Produce a Concrete Result.

Regarding the concrete result requirement, the OG Notice states:

Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. In other words, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. In re Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is "irreproducible" claim should be rejected under section 101). The opposite of "concrete" is unrepeatable or unpredictable. Resolving this question is dependent on the level of skill in the art. For example, if the claimed invention is for a process which requires a particular skill, to determine whether that process is substantially repeatable will necessarily require a determination of the level of skill of the ordinary artisan in that field. An appropriate rejection under 35 U.S.C. Sec. 101 should be accompanied by a lack of enablement rejection under 35 U.S.C. Sec. 112, paragraph 1, where the invention cannot operate as intended without undue experimentation.

Even if the algorithm used by Claims 1 or 13 are abstract ideas (which they are not), Claims 1 and 13 nonetheless produces a concrete result. Both claims set forth a repeatable or reproducible result.

Claim 1 simply tracks, over a selected time period, contacts serviced by agents and determines which of the serviced contacts are related or unrelated. The result, which is the

indicator, simply indicates a number of related or unrelated contacts identified. The result can be a raw number, a percentage, or other indicator.

Claim 13, for an incoming or outgoing contact, determines whether the contact is related to another customer contact. When the incoming or outgoing contact is related, it is treated differently than when it is unrelated. The different treatment can, for instance, include directing the contact to a different agent than it would otherwise be directed to. This is so because the contact center desires related contacts to be serviced by the same agent.

The tracking or determining steps in claims 1 and 13, respectively, can be implemented readily using, for example, a rule-based system. The rules ensure that the result is repeatable.

The Rejected Claims Do Not Preempt a Judicial Exception.

Regarding this requirement, the OG Notice states:

Even when a claim applies a mathematical formula, for example, as part of a seemingly patentable process, the examiner must ensure that it does not in reality "seek[] patent protection for that formula in the abstract." Diehr, 450 U.S. at 191, 209 USPQ at 10. "Phenomena of nature, though just discovered, mental processes, abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." Benson, 409 U.S. at 67, 175 USPQ at 675. One may not patent a process that comprises every "substantial practical application" of an abstract idea, because such a patent "in practical effect would be a patent on the [abstract idea] itself." Benson, 409 U.S. at 71-72, 175 USPQ at 676; cf. Diehr, 450 U.S. at 187, 209 USPQ at 8 (stressing that the patent applicants in that case did "not seek to pre-empt the use of [an] equation," but instead sought only to "foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process"). "To hold otherwise would allow a competent draftsman to evade the recognized limitations on the type of subject matter eligible for patent protection." Diehr, 450 U.S. at 192, 209 USPQ at 10. Thus, a claim that recites a computer that solely calculates a mathematical formula (see Benson) or a computer disk that solely stores a mathematical formula is not directed to the type of subject matter eligible for patent protection. If an examiner determines that the claimed invention preempts a Sec. 101 judicial exception, the examiner must identify the abstraction, law of nature, or natural phenomenon and explain why the claim covers every substantial practical application thereof.

Neither Claim 1 nor 13 patents every "substantial practical application" of an abstract idea" and therefore attempts to patent the abstract idea itself. Each claim requires specific input and produces specific output, each of which is restricted to a contact center. It does not attempt to patent every customer interactive application.

The Examiner's Test is Improper.

The Examiner states that the rejected claims do "not include any tangible computer or network references" and states that the recited process "must somehow apply, involve, use or advance the technological arts."

Neither of these tests is proper.

Regarding the former test, the OG Notice states:

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete."

The OG Notice further states:

It is immaterial whether the process may be performed by some or all steps that are carried out by a human. Claims are not directed to non-statutory processes merely because some or all the steps therein can also be carried out in or with the aid of a human or because it may be necessary for one performing the processes to do some or all of the process steps. The inclusion in a patent of a process that may be performed by a person is not fatal to patentability. *Alco Standard Corp. v. Tennessee Valley Authority*, 808 F.2d 1490, 1496, 1 USPQ2d 1337, 1341 (Fed. Cir. 1987) (citing *Diehr*, 450 U.S. at 175); see e.g. *Smith & Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 61 USPQ2d 1065 (Fed. Cir. 2001) (method claim where all the steps are carried out by a human). Therefore, USPTO personnel should no longer rely on the human step test to determine whether a claimed invention is directed to statutory subject matter.

The OG Notice further states:

Whether a claim recites a machine implemented process is not determinative of whether that process claim is statutory. Such a test would recognize that an abstraction merely implemented on a computer is statutory. An example will illustrate the point. Assume that $y = 2x + C$, where x and C are positive real numbers, is nothing more than an abstract idea. The claim recites: a computer-implemented process comprising providing x and C defined as positive real numbers, multiplying x by 2 to get Z and determining y by adding C to Z . Thus, the claim is nothing more than an abstract idea which is machine implemented and such a claim is not statutory. See, e.g., *Benson*, 409 U.S. 63, 175 USPQ 673 (finding machine-implemented method of converting binary-coded decimal numbers into pure binary numbers unpatentable). However, using the machine implemented test, the claim would be found to be statutory.

Accordingly, whether or not the claim uses a tangible computer or network reference is irrelevant.

Regarding the second test, the OG Notice states:

United States patent law does not support the application of a "technical aspect" or "technological arts" requirement. Title 35 of the United States Code does not recite, explicitly or implicitly, that inventions must be within the "technological arts" to be patentable. Section 101 of Title 35 recites that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor . . ." Accordingly, while an invention must be "new" and "useful," there is no statutory requirement that it fit within a category of "technological arts." Moreover, although there has been some judicial discussion of the expression "technological arts" and its relationship to patentability, this dialogue has been rather limited and its viability is questioned. In 1970, the Court in *In re Musgrave* [431 F.2d 882, 167 USPQ 280 (CCPA 1970)] introduced a new standard for evaluating process claims under Section 101: any sequence of operational steps is a patentable process so long as it is within the technological arts so as to promote the progress of useful arts. Since the announcement of a new "technological arts" standard in *Musgrave*, only fourteen cases make reference to this so-called "technological arts" standard. In fact, only a handful of cases immediately following the *Musgrave* decision employed the "technological arts" standard in determining whether an invention is a process within the framework of Section 101. Instead, the Supreme Court refused to adopt that test when it reversed the Court of Customs and Patent Appeals in *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ 673 (1972). See also *Diehr*, 450 U.S. at 201, 209 USPQ at 14 (J. Stevens dissenting) (discussing the Court did not recognize the lower court's technological arts standard).

Accordingly, whether or not the claim applies, involves, uses, or advances the technological arts is irrelevant.

For at least these reasons, the Examiner's rejection is improper.

The Examiner further rejects Claims 1-11, 13-25, and 27-40 under 35 U.S.C. Section 102(e) as being anticipated by McKenna, et al., (U.S. 7,212,625).

Applicant disagrees. McKenna, et al., fail to teach or suggest at least the italicized features of independent claims 1, 13, and 27:

1. A method, comprising:

(a) *tracking, by a repeat contact determining agent and over a selected time period, for a set of a plurality of agents servicing a plurality of discrete real-time and non-real-time contacts from different customers, a number of discrete real-time and non-real-time contacts serviced by the set of agents that are and/or are not related to one or more other discrete real-time and non-real-time contacts from different customers serviced by the plurality of agents;*

(b) *maintaining, by the repeat contact determining agent and for the set of agents, an indicator indicating at least one of (i) a number of discrete real-time and non-real-time contacts, serviced by the set of agents during the selected time period, that are not*

related to one or more other discrete real-time and non-real-time contacts serviced by one or more of the plurality of agents and (ii) a number of discrete real-time and non-real-time contacts, serviced by the set of agents during the selected time period, that are related to one or more other discrete real-time and non-real-time contacts serviced by the plurality of agents; and

(c) using the indicator for at least one of the following purposes:

(c1) evaluation of performance of the contact center and/or one or more agents; and
(c2) determination of a routing destination for a selected currently pending contact.

13. A method, comprising:

(a) at least one of receiving a first real-time contact from and initiating a second real-time contact with a first customer;

(b) *determining, by a repeat contact determining agent, whether the first and/or second contact is related to another real-time or non-real-time contact with the first customer; and*

(c) when the first and/or second contact is related to another real-time or non-real-time contact with the first customer, servicing, by a contact center resource, the first and/or second contact differently than when the first and/or second contact is unrelated to another real-time or non-real-time contact with the first customer.

27. A contact center for servicing contacts, comprising:

(a) an input operable to receive a contact from a first customer; and

(b) a selector operable (i) to determine whether the received real-time contact is related to another real-time or non-real-time contact with the first customer and (ii) when the received real-time contact is related to at least one real-time and non-real-time contact with the first customer, to service, by a contact center resource, the received real-time contact differently than when the received real-time contact is unrelated to at least one real-time and non-real-time contact with the first customer.

McKenna, et al, are directed to a call center that allows a customer to determine what media channel he or she desires to use to make a call based on resource availability across multiple media. At col. 4, line 62, to col. 5, line 55, McKenna, et al., teach the determination of a "queue result" for each different service provider based on a "queue attribute" and "queue factor" for each service provider. The queue attribute for each service provider resource is based on the actual queue depth, estimated wait time or average call duration, the number of calls in the queue calculated by the queuing engine, and/or estimated resource availability. The "queue factor" is a mathematical factor that acts upon the queue attribute to calculate the queue result. In other words, the queue result is a function of the queue attribute and the queue factor. The queue factor can be based on external value attributes such as value of the customer to a business, the

estimated return on relationship, or the salary expense of a particular resource agent. The queue results are then presented to the caller so the caller knows the available service options.

McKenna, et al., says nothing about (i) the servicing of contacts by agents (Claim 1), (ii) tracking *past* service results to determine adherence of the call center to specified policies (Claim 1), (iii) determining whether a contact is related to another contact from the same customer (Claims 1, 13, and 27), and finally (iv) about using the results of the determination in servicing the contact (Claims 13 and 27).

Accordingly, the pending claims are allowable.

The dependent claims provide added reasons for allowability.

By way of example, dependent claim 4 determines relatedness of contacts by assuming, when two contacts are received from the same customer during a predetermined period of time, that the two contacts are deemed to be related.

Dependent claim 7 requires that each agent in the set has a corresponding indicator indicating a number of contacts, serviced by the set of agents during a selected time period, that are (i) not related to another contact serviced by one or more of the plurality of agents or (ii) related to another contact serviced by one or more of the plurality of agents and the further steps:

(d) receiving a contact to be serviced by one of the plurality of agents;

(e) retrieving agent profiles for the set of agents; and

(f) assigning one of the set of agents to service the contact based, at least in part, on a comparison of the indicators corresponding to the agents in the set.

Dependent claim 8 requires the indicator to indicate a number of contacts, serviced by the set of agents during the selected time period, that are not related to another contact serviced by one or more of the plurality of agents and a single contact to be defined as each interaction between a selected agent and a selected customer such that an agent-to-agent transfer of a communication from the selected customer is considered to represent multiple contacts.

Dependent claim 9 requires the indicator to indicate a number of contacts, serviced by the set of agents during the selected time period, that are related to another contact serviced by one or more of the plurality of agents and a single contact to be defined as all interactions between all members of the set of agents and a selected customer such that an agent-to-agent transfer of a communication from the selected customer is considered to represent a single contact.

Dependent claim 14 requires in step (a) the first real-time contact to be in queue awaiting servicing and the further step:

(d) while in queue, tagging the first contact with a number of related previous real-time and/or non-real-time contacts with the first customer. *See* claim 28.

Dependent claim 15 requires the servicing step to include the sub-steps:

when the first and/or second contact is related to a previous contact with the first customer, at least one of (i) recording the first and/or second contact interaction to form a transcript of the interaction, (ii) forwarding the first and/or second contact to a first agent having a first skill, and (iii) activating quality monitoring; and

when the first and/or second contact is unrelated to a previous contact with the first customer, not performing the at least one of (i) recording the first and/or second contact interaction to form a transcript of the interaction, (ii) forwarding the first and/or second contact to a first agent having a first skill, and (iii) activating quality monitoring. *See* claim 29.

Dependent claim 16 requires the contact center to include a plurality of agents to service a plurality of contacts and the further steps:

(d) tracking, for each of the plurality of agents over a selected time period, a number of contacts serviced by the agent that are related to another contact serviced by the plurality of agents; and

(e) maintaining, for each of the plurality of agents, an indicator indicating at least one of (i) a number of contacts, serviced by the corresponding agent during the selected time period, that are not related to another contact serviced by the plurality of agents and (ii) a number of contacts, serviced by the corresponding agent during the selected time period, that are related to another contact serviced by the plurality of agents. *See* claim 30.

Dependent claim 17 requires the further steps:

(c) when the first and/or second contact of the first customer is serviced by an agent, receiving from the servicing agent a subject matter identifier indicating a purpose of the serviced contact; and

(d) when a later third contact is received from the first customer, comparing a second subject matter identifier associated with the third contact with the first subject matter identifier to determine whether the first and/or second and third contacts are related. *See* claim 31.

Dependent claims 39-40 require: the identification, for at least one of an agent and selected grouping of agents, a number of one-and-done contacts serviced by the at least one of an agent and selected grouping of agents, wherein each of the one-and-done contacts is not related to one or more other contacts from a common customer.

Based on the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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